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ROENTGEN-RAY DIAGNOSIS OF DISEASES OF BONES.*

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One of the developments in Roentgen-ray diagnosis which is of the utmost importance, and the diffusion of which is essential for further progress in medicine, consists in the recognition and differentiation of disease of the osseous system.

Fractures, injuries and abnormalities, acquired and congenital, have heretofore received due consideration, and the Roentgen literature on these subjects is voluminous and satisfying; the subject of disease of bone, however, still offers fertile soil for further study.

The object of this paper is not to cover the entire subject by reference to or including the work of others; it will consist of an exhibit and discussion of lantern-slides collected by the writer during the past decade and upon which discussion and criticism is invited from the members for mutual profit.

Rachitis, Barlow's disease, acromegaly, cretinism and myxedema will not be discussed in this article, as the usual methods of diagnosis are quite satisfactory in above lesions, and their additional presentation would extend the scope of this paper so as to make it too lengthy.

The lesions which will be shown in sequence are as follows: Periostitis, enchondroma, osteitis, osteo-myelitis, osteo-malacia, ossium fragilitas, bone-cysts, osteoma, including bone changes in early arthritis deformans, osteo-sarcoma and lastly tubercular, syphilitic and gonorrhoeal bone lesions.

The first slide represents a common periosteal lesion found after typhoid fever—bulging out of the periosteal shadow and practically

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no involvement of the bone itself. Simple periostitis is difficult to diagnose until the inflammatory process has produced some swelling and deposits of some size are noted. This requires at least one week when circumscribed areas of darkness coincident with exudation and sclerosis appear. Suppuration and necrosis are readily distinguished when supervening upon simple periostitis. In these cases there are circumscribed areas of darkness and mottling which may eventually extend over a large area.

Dental injuries frequently produce maxillary periostitis and the Roentgen-ray will readily differentiate this lesion from neuralgia and neuritis at this and other locations. A number of cases of so-called facial or maxillary neuralgia were, after Roentgen examination, found to be due to periosteal inflammation or abnormalities of the tegumentary system and not due to nerve lesions.

In periostitis gummosa, infiltration of the gummatous deposits causes a swelling of the periosteum and of the Haversian canals; the nutrient marrow channels enlarge and become filled with gummatous material. This swelling of the periosteum and the invasion of bone in secondary syphilis produces a characteristic bulging; a bow-like curve is especially noted at the tibial upper and middle third and has long been a classic diagnostic feature of this disease. These lesions will be shown under syphilitic bone lesions.

Enchondroma or Chondroma.

Enchondroma is found most frequently in the metacarpal and phalangeal bones, but may also occur in other long bones such as the humerus, ulna, radius and femur. Enchondromata of the ribs and other bones of the skeleton have also been noted. These cartilaginous tumors appear homogeneous (similar to sarcoma); they have, however, islands of bone interwoven with the homogeneous mass, giving it a net-like appearance. The cartilaginous portions produce a lighter shadow than the bone tissue and the latter is gradually destroyed by the chondroma. The shaft tissues are invaded as in osteo-sarcoma, from which this lesion must be differentiated. Chondromata do not affect the periosteum, which is an important diagnostic point. When these chondromata calcify, a mixed tumor, osteo-chondroma is formed. Sarcomatous degeneration may also supervene and chondro-sarcoma be the result.

Ostitis.

Ostitis is usually associated with periostitis and may follow fractures, severe injuries or infectious processes. The slide showing incomplete fracture of the tibia shows an area of ostitis followed by osteo-myelitis. In chronic cases sclerosis of bone follows and the whole of the affected bone shows an almost uniform dark area with some irregularity in contour at different points on the periphery. In aggravated cases ostitis deformans may supervene with deformity and irregularity of bone. The tibia is the most frequent site of this lesion, which may also involve the humerus, clavicle and femur.

Osteo-Myelitis.

Osteo-myelitis is diagnosed with the Roentgen-ray when distinct pathological changes in bone have occurred. This may require some time; the older the lesion the more easy is the Roentgen diagnosis. This affection is usually due to infection, but often follows extension of a periostitis and ostitis. It is confined to bone and does not invade the soft tissues excepting through sinus formation or breaking down of tissues through continuity of inflammation.

Osteo-myelitis presents four points for Roentgen diagnosis:

- I. Ossifying periostitis and ostitis.
- II. Sclerotic changes.
- III. Abscesses and cavities.
- IV. Sequestra of bone.

The shaft of the distal end of bones is the favorite site. There are found centrally located, circumscribed, clear spaces (cavities) with surrounding darkened areas (due to ostitis) and coincident periosteal enlargement, sometimes destruction and darkened shadows of same. Sequestra of bone when present can be readily located and abscess and sinus formation determined—the latter by means of the Bismuth injection method. In chronic cases of osteo-myelitis the myelogenous portion of bone shows a darker and enlarged shadow owing to sclerosis.

Osteo-myelitis is distinguished from sarcoma from the fact that the latter invades surrounding soft tissue while the former is confined to bone. Osteo-myelitis is a *destructive* process; sarcoma a *proliferating* process. Sarcoma prefers the extreme ends of the shafts of bone and commences as a subperiosteal growth, excepting

in the giant cell variety, which usually starts in the medulla. In advanced cases of osteo-myelitis the diagnosis is very easy, as necrosis, caries, cavities and sequestra of bone can be readily noted.

Osteo-Malacia.

Osteo-malacia is rendered easy of diagnosis by means of the Roentgen-ray. It may be suspected in cases of spontaneous fractures (syphilis and osteoporosis must be excluded), but the characteristic Roentgen gram will clear away all doubt. We find here a *shell-like appearance* of bone—due to lack of calcium salts, and an increased medullary shadow. These characteristic shadows are found in no other lesion and the study of a few plates and points will impress the picture of the disease upon the diagnostician so that it will be readily identified. Osteo-myelitis may be confused with osteo-malacia, but in the former the cavities, necrosis of bone and sclerotic areas of bone should clear away all doubt.

Osteoporosis, which frequently follows locomotor ataxia, shows destruction of osteo-blasts and, like osteo-malacia, is followed by spontaneous fracture. It is usually confined to small areas and does not present the enlarged medullary shadow nor the shell-like envelope of bone found in osteo-malacia.

Fragilitas Ossium.

Fragilitas ossium—this condition is closely allied to osteoporosis. The medullary tissue loses its cells and fatty or gelatinous change takes place, causing an increase in the medullary space and rendering the bone subject to spontaneous fracture. Calcium salt deficiency is also noted and the bone thus becomes brittle, and trauma or a fall will cause fracture of the bone.

Bone-Cysts.

Bone-cysts may follow various lesions of the osseous system. Ostitis with sclerosis following same frequently antedates cystic changes in bone. Trauma is also a common cause. Bone-cysts may be single or multiple and are always intra-osseous. The Roentgen gram shows a *light*, intra-osseous space, not interwoven with islands of bone as in chondroma and the periosteum is not affected. It is differentiated from osteo-sarcoma from the fact that the latter rapidly becomes extra-osseous, invades soft tissues, expands the periosteum and also shows a clear outline of sarcomatous

invasion of bone tissue, dark bone tissue being replaced by the light sarcoma corpuscles.

Osteoma.

Osteomata, while generally associated with the osseous system, may also occur in soft tissues (lungs, meninges, etc.). Small bony growth are designated as osteophytes; when the tumor extends over a large area, as *exostoses*. When the growth is confined to the center of bony structures it is called *enostosis*. Bony tumors may also develop from the enamel of teeth and are called dental osteomata; when developed from the pulp they are designated as odontomata.

Osteomata are classified as hard and spongy and may be single or multiple—most frequently the latter. These lesions are readily diagnosed with Roentgen-ography. All exostoses present irregular outlines, showing a darker shadow than true osseous tissue. They have a slow growth and do not involve the periosteum. It is of the utmost importance to differentiate this lesion from osteo-sarcoma. The osteo-sarcoma has involvement of the periosteum, a more regularly rounded outline, the sarcoma tissue presents a homogenous light shadow and rapid invasion of the soft tissues. The light sarcoma as compared with the dark tissue of osteoma can be well shown on a properly developed plate.

An early diagnosis of *arthritis deformans* is claimed by Haenisch, of Hamburg, in the appearance of small exostoses or buddings of bone from the epiphyses. In cases of involvement of the knee, these points invade the joint from the spines of the tibia and are also noted at the extremities of the fibula and tibia. The patella also shows these buddings or pointed exostoses very clearly. This is a very important point in diagnosis, as an early detection of arthritis deformans offers some hope for therapeutic success in this otherwise intractable disease.

Rheumatoid arthritis—arthritis urica—has characteristic, irregular exostoses in the phalanges, patella and also the epiphyseal portions of large bones. They are always multiple when examined and look like the thorns of small cacti.

Osteo-Sarcoma.

The ability to diagnose promptly osteo-sarcoma by means of the Roentgen-ray is of great importance, as the earliest possible removal of a sarcomatous growth is essential in order to avoid metastasis

and to save life. The prompt surgical removal of small sarcomata, followed by vigorous Roentgenization of the effected area, has been successful in a number of cases under our observation during the past nine years.

Osteo-sarcoma may be periosteal—sometimes myelogenous or mixed. The favorite location is the end of long bones; rarely, if ever, are the epiphyses the starting point, although the tumor often spreads there by continuity of growth. The osteo-sarcoma usually starts as a sub-periosteal growth, raises the periosteum, separates it from the bone and gradually involves the whole circumference of the periosteum, which may be destroyed from pressure. Bone sarcoma looks homogeneous and produces a pale, light shadow as compared with bone tissue. It rapidly spreads into surrounding soft tissues and is not confined to bone. When osteoblasts are still present in the tissues a honey-comb appearance is noted.

Giant cell sarcoma is often found centrally located within the medulla, destroying and replacing the tissue and leaving a homogeneous light center. When this lesion is discovered early, thorough chiseling, drilling and curretting will prove efficient and obviate amputation.

Osteo-sarcoma must be differentiated from osteoma, enchondroma, bone-cysts, osteo-myelitis, syphilitic gumma and tuberculosis of bone.

- I. Osteomata have more irregular outlines than osteo-sarcoma, have darker tumor shadows, grow slowly and do not involve the periosteum.
- II. Enchondromata are found usually on the phalanges and metacarpal bones and show characteristic islands of bone interspersing the otherwise light shadow of the cartilaginous tumor. They are usually *multiple*, while osteo-sarcoma is usually *single*.
- III. Bone-cysts are always *intra-osseous* and have a regular homogeneous outline (like sarcomata); the latter, however, quickly have extra-osseous extension with involvement of soft tissue. In addition bone-cysts are often multiple, sarcoma is not.
- IV. Osteo-myelitis is also *intra-osseous* with destruction of bone and if abscesses supervene, the surrounding tissues show darkened areas due to *ostitis*. Characteristic cavities and sequestra of bone are also to be found in chronic cases.

- V. Syphilitic gumma presents a *dark, almost black shadow* and produces a spindle-like protrusion of the periosteum with irregular nodules. A large area of bone may be involved. The periosteum looks moth-eaten or net-like in some places. In sarcoma the bulging out of the periosteum is more localized and not spindle-shaped or fusiform—it does not affect as large an area of bone as syphilis and rapidly extends into soft tissues, while syphilis is confined to bone.
- VI. Tuberculosis of bone shows an indefinite, very pale shadow of bone with atrophy of same and no invasion of soft tissues. The joint affected may be much swollen, but the bone itself does not partake of this process.

Syphilis.

The Roentgen-ray has been of great service in the diagnosis of syphilitic bone lesions. Congenital syphilis, lues, hereditaria lata and gumma show characteristic shadows upon the Roentgenogram.

In congenital syphilis there is periosteal enlargement about the metacarpal bones or phalanges; or the metatarsal or tarsal bones may be affected similarly. The periosteal shadow appears like a cloak hung about bone and this dark envelope is *characteristic* of congenital syphilis. Syphilis does not produce atrophy of bone such as is found in tuberculosis—it produces an increase in shadow density, while tuberculosis causes a diminution of the shadow density and does not involve the periosteum. When we appreciate that the spirocheta pallida may enter the body in numerous ways aside from sexual contact, such as from smoking, drinking from infected cups, kissing, handling of coin which has been in contact with a mucous patch, examination of syphilitics and infection through contact as from an abrasion, hang-nail, etc.—any measure which will assist in clearing up questioned diagnoses in suspected cases should be welcomed.

Syphilitic periostitis or *gummatous periostitis* presents the following points in Roentgen diagnosis:

- I. Irregular contour of periosteum.
- II. When the continuity of the periosteum is destroyed, the tissue looks as though moth-eaten or reticulate.
- III. Sclerosis of bone with increased shadow of the bone is always an accompaniment of syphilitic invasion.

- IV. In certain locations as the anterior surface of the tibia, a curve or bow-like protrusion is formed, due to the bulging out of the periosteum.
- V. There is no atrophy of bone. (In tuberculosis there is.) Differentiating these diagnostic points from other bone lesions we have:
 - I. In periostitis due to infection or trauma—there is increase of periosteal shadow but no involvement of bone—no sclerosis of bone—the dark shadow of the gummatous deposits is also missing.
 - II. Non-syphilitic osteo-myelitis: This disease lacks the irregular contour of syphilitic bone invasion. Osteo-myelitis is usually confined to the shaft and soon causes abscesses—cavities and sequestra. The periosteal involvement in *non-syphilitic* osteo-myelitis is usually slight while in syphilis the periosteal and sub-periosteal areas are much involved.
 - III. Peripheral sarcoma—this lesion has circular periosteal enlargement of the affected bone and the sub-periosteal involvement presses out the periosteum, which it soon destroys, involving neighboring tissues. The sarcoma tissue has a *light homogeneous* shadow, while the gumma presents a *dark* shadow—and the soft tissues are *not* invaded by the syphilitic process, being confined to bone and periosteum.
 - IV. Tuberculosis of bone—here there is absence of sclerosis—hence no *dark shadows* of the involved bone and while enlargements of joints are noted similar to syphilis, the bone itself tends towards *atrophy*, and presents a pale, sometimes hardly perceptible, shadow. In syphilis there is hyperplasia with characteristic periosteal involvement and local necrosis. Gummatous lesions are often multiple and the typical bow-like periosteal bulging and underlying sclerosis with *increased darkening* of shadows make the diagnosis a matter of certainty.

Tuberculosis of Bone.

Tubercular osteo-myelitis. Tuberculosis of bone is characterized by faint indefinite shadows due to lack of lime-salts—the plate has the appearance of having been over-developed. There is absence of periostitis and there are *no dark sclerosed* areas and atrophy of bone supervenes.

Macroscopically the joints appear enlarged, but the *bones themselves* become atrophied. The enlargement being due to fungoid proliferation, does not show on the plate—when cheesy degeneration or calcification supervenes the shadows are more readily differentiated. Tuberculosis of bone occurs most frequently in the center of the epiphyses or below the articular cartilage, preferring the long bones, femur, humerus, radius and ulna and lower extremity. In children the vertebra are a common seat of the disease.

Tuberculosis of bone presents little difficulty in differential diagnosis:

- I. Pale, in definite shadow of bone; devoid of contrast.
- II. Epiphyseal preference.
- III. Atrophy of bone substance involving large areas.
- IV. Lack of periosteal involvement.
- V. Lack of sclerosis and hence no dark shadows.
- VI. Enlargement of joint shadow, without increase of bone shadow.

Tubercular dactylitis must be differentiated from syphilis and osteo-myelitis. The latter rarely attacks the epiphysis, excepting by extension of inflammation, being an *intra-osseous* lesion.

Syphilis presents a dark shadow with marked involvement of the periosteum, forming a dark cloak or ring about the bones. Tubercular dactylitis has no periosteal involvement and the bone itself appears pale, excepting at the site of a circumscribed abscess where a single dark spot will appear.

Gonorrhœal Bone Lesions.

The writer has, within the past year, made a special study of this subject in conjunction with Professor Dr. B. G. Carleton, of New York, who is particularly interested in noting the therapeutic effects of gonorrhœal vaccines in chronic joint lesions.

The Roentgen-ray shows the deformity of joints and a general loss of shadow similar to tuberculosis. This loss of shadow is due to diminution of lime-salts and affects all contiguous bones at their involvement in the joint inflammation. The writer has particularly noted what he has termed "Carleton's spots" in all well-developed prints of gonorrhœal joint lesions. These spots present small areas of sclerosis or localized inflammation and disappear when the lesion is improved. These spots have been noted previously after injuries

or bullet wounds, but in gonorrhœal bone lesions they are multiple and we judge them to be pathognomonic from the fact that in some cases after vaccinè and hyperæmic treatment, they have disappeared.

Tophi in gout present similar small, frequently large spots—in this lesion, however, the spots are *extra-osseous* and other characteristic joint features are readily discerned.

To re-capitulate the Roentgen diagnosis of gonorrhœal bone lesions:

- I. Deformity and enlargement of joints.
 - II. Diminution of shadow involving the peripheral portion of all bones of the affected joints.
 - III. Small sclerosed areas in the bone or epiphyses of bone. Carleton's spots. These spots are always *intra-osseous*.
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THE DUTIES OF THE PHYSICIAN.*

By Geo. A. Shepard, M. D.

The duties of the physician, as laid down in the code of ethics, may rest upon our library shelves, but will it not be well, occasionally, to refresh our memories in order that we may keep ourselves from falling into bad habits? Laws on the Statute Books tell us some things which we must do and others which must not be done, but the ethics of the profession must be ingrained into the *very fibre* if our honor is to pass unscathed through the battle of Life. We read that the great principles upon which medical ethics are based are these:

1. THE GREAT END AND OBJECT OF THE PHYSICIAN'S EFFORTS SHOULD BE "THE GREATEST GOOD TO THE PATIENT."
2. THE RULE OF CONDUCT OF PHYSICIAN AND PATIENT AND OF PHYSICIANS TOWARD EACH OTHER SHOULD BE THE GOLDEN RULE, "AS YE WOULD THAT MEN SHOULD DO TO YOU, DO YE ALSO TO THEM LIKEWISE."

The true physician is something more than a mere dispenser of

*Read before the Hom. Med. Society of the County of New York by the retiring president.

medicines or a surgical operator, serving those who are seriously ill; he is an idealist, whose every effort is put forth to raise the world to a higher mental, moral and physical plane; he must teach clear thinking and straight seeing, including obedience to the moral and physical laws, which tend toward the development of the perfect type of man and woman. The study of the normal functions of the mind and body, and experience with the pathological changes which come from a disturbance of these functions, through organic disease and psychic influence, gives him a point of view enjoyed by the members of no other profession. This high place can only be filled by one who enters it in a truly missionary spirit, not hoping for adequate temporal reward. Every living thing responds to the touch of the healing hand and gives in return a confidence which cannot be obtained by might or argument: thus can the physician enter into the very heart of man, to do a mighty work for good or ill.

A noble past, extending back over more than twenty-four centuries, has shown the medical man, while holding to the faith of his fathers, yet, always reaching into the unseen, with the arms of science and unselfish experiment, to grasp something new, with which posterity may be benefited. The dark ages of medicine are past, and we seem to be entering upon an era in which scientific advancement shall be unhampered by intolerance and superstition. There are few men who have the education, temperament, physical, mental and moral soundness to measure up to the full stature of the ideal physician, and we must, as individuals, make the fight along right lines if the great problems of the prevention and cure of mental, moral and physical disease are to be solved. As yet we have merely scratched the surface in the study of prevention, even though great things have been accomplished in the last century and a quarter by such men as Jenner, Lister, Koch and other careful investigators. It is with a chastened spirit that we read the life of the great Hippocrates, that product of an age which gave to the world such men as Sophocles, Euripides, Aristophanes, Socrates, Plato, Xenophen, Herodotus, Phidias, Confucius and Zoroaster. Did Phidias chisel into cold marble the real throb of life any more perfectly than did the Father of Medicine express the spirit which has dominated our profession and will continue so to do?

The Oath we have all heard, but it will bear repetition:

Oath of Hippocrates.

I swear by Apollo, the physician, by Æsculpius, by Hygeia, by Panacea, and by all the gods and goddesses, calling them to witness that according to my ability and judgment I will in every particular keep this, my oath and covenant—to regard him who teaches this art equally with my parents, to share my substance, and, if he be in need, to relieve his necessities; to regard his offspring equally with my brethren, and to teach his art if they shall wish to learn it, without fee or stipulation; to impart a knowledge by precept, by lecture, and by every other mode of instruction to my sons, to the sons of my teacher, and to pupils who are bound by stipulation and oath, according to the law of medicine, and to no other.

I will use that regimen which, according to my ability and judgment, shall be for the welfare of the sick, and I will refrain from that which shall be baneful and injurious. If any shall ask of me a drug to produce death, I will not give it, nor will I suggest such counsel. In like manner I will not give to a woman a destructive pessary.

With purity and holiness will I watch closely my life and my art. I will not cut a person who is suffering from a stone, but will give way to those who are practitioners in this work. Into whatever houses I shall enter, I will go to aid the sick, abstaining from every voluntary act of injustice and corruption, and from lasciviousness with women or men—free or slaves.

Whatever in the life of men I shall see or hear, in my practice or without my practice, which should not be made public, this will I hold in silence, believing that such things should not be spoken.

While I keep this, my oath, inviolate and unbroken, may it be granted to me to enjoy life and my art, forever honored by all men; but should I by transgression violate it, be mine the reverse.

The basic principles underlying mental healing, Christian Science, the Emmanuel Movement, and the like, are contained in the armamentarium of the well-rounded physician, and it must be remembered that, in the early days of Greek medicine, Temples of Health, presided over by the Asclepiadæ, or priest physicians, were erected in various parts of Greece. It is worthy of note that most of these temples were built in the vicinity of medicinal springs, the virtues of which, undoubtedly, contributed greatly to the cure of the sick. The devotee was subjected to purifications, and made to go through

a regular course of bathing accompanied by methodical frictions and the administration of decoctions of herbs. Every means that could be thought of was used for working upon the imagination of the sick, such as religious ceremonies of an imposing nature, accompanied by music and whatever else could arouse their senses and conciliate their confidence. Even though Hippocrates was complimented by Celsus for having separated medicine from the realms of philosophy and religion, yet he, undoubtedly, gained much of his knowledge of anatomy, diatetics, gymnastics and therapeutics from these same priest-physicians. His writings bear the impress of a personality which had a high ideal of duty to his fellow-men and to his profession, of one who had utter contempt for ostentatious charlatanry and freedom from popular superstition. His belief in *vis medicatrix naturæ* led him to lay down this general rule by which a physician should regulate his treatment—"to do good, or at least to do no harm."

Is a physician's work all done when he has treated the immediate ills of which the patient complains, or ought he to try to find out what stands between his patient and perfect health, and base his advice and treatment upon this latter knowledge? It has been the accepted practice for some years to remove adenoids in mouth breathers and, more lately, to correct malformations of the dental arch in the same class of cases, but what percentage of physicians feel it their duty to see that children are properly shod so as to give room for normal development of the feet. The belief which is so prevalent that night air is dangerous is as fallacious as was that of the Druids—that a human life must be sacrificed in time of great stress. A woman in an intelligent New England community remarked to her landlord one brisk morning that her furnace was defective and the house was so full of gas the night before that she actually had to open the windows, feeling that she might as well die from the effects of night air as of coal gas. One of our essayists last year remarked that the only objection he had to the campaign for the fresh air treatment of tuberculosis was that people seemed to feel that fresh air was not good for a person who did not have tuberculosis. *We* must mould public opinion by teaching our patients individually the natural processes of life and enthusing them with the spirit which goes for proper living. It may be that we shall be looked upon as iconoclasts if we smash the prudish struct-

ure which keeps so many boys and girls from the knowledge of the changed conditions brought about by puberty and allows girls to enter the married state without any understanding of what it all means. Possibly it is heresy to say that the school teacher who teaches a Sunday School class is breaking the law of God just as much as is the stock speculator who takes his recreation speeding his automobile at sixty miles an hour, or playing bridge for a high stake; but the physician must see in it the wreck which *will* follow if no time is given for recuperation by absolute change of occupation. There is no widespread interest shown in the conservation of our natural resources; it is at least as important that we conserve the health of the present and coming generations by seeing to it that occupational diseases are prevented. In these days the human element in manufacturing establishments is brought down almost to the level of the automatic machine, and normal physical and mental development is stopped unless intelligent measures are introduced to counteract the deadening effect of the daily occupation. The vested interests are not always wise and generosity to employes often seems to spell diminished dividends. The physician can hold the public in the hollow of his hand, in matters pertaining to health, if he be intelligent as to the conditions in his community and persistent and forceful in making these conditions known. The curriculum of our schools often calls for too great an expenditure of nerve force, by the children between the ages of ten and fifteen, hindering proper development of the nervous system. The teachers in our primary schools are often so over-worked that they are unable to give the children that individual oversight which is essential to proper instruction, and, long before the term ends, they are totally unfitted for the proper performance of their duties. The school-house and school-room should be examples of cleanliness and afford every means to help the child to live. It seems hopeless to teach hygiene when the child has but to look about to see filth. Health is fundamental, and in the school the child should be trained to habits of health. In order to accomplish this end, conditions in the school-room must be wholesome. The school should be well lighted and the air fresh. There should be time for play out of doors and facilities for bathing.

In the great anti-tuberculosis fight which is now being waged great discretion upon the part of the physician is required lest un-

necessary hardships be forced upon the sufferer, such as being deprived of employment or being driven from home into uncongenial surroundings, there often to die of home-sickness. Apropos of this is the recent statement of the Health Board of the State of Massachusetts:

"It is not at all uncommon to-day to hear of instances where the very means of obtaining one's livelihood have been taken away because the person was unfortunate enough to have tuberculosis. To take away from such a person the means of obtaining his livelihood is to take it from the very person who needs it most. It should be remembered that a person ill with tuberculosis whose personal habits are clean and who takes care of the material which he coughs up is a safe person to live with, and that he may attend to his work without endangering his fellow-men. Failure to appreciate this fact is already causing many hardships which are both unnecessary and unjust."

Births, deaths, diphtheria, scarlet-fever and small-pox are all reported to the Health Department, but venereal diseases of the most virulent character, the effects of which are felt unto the third and fourth generation, are hidden even from members of the family. The duty of the physician to his patient and to the public seems sometimes to conflict, but should not the ethics of the profession demand that the good of the many be considered before the good of the few? There are immutable laws of health and life, which, if disobeyed by the individual, by the city, by the country or by the race, bring down penalties upon that individual, city, country or race. Natural laws cannot be contravened without being followed by natural penalties. Even as the scribes of old expounded to the people the law of Moses and the Prophets, so the physician must interpret to his clientele the laws underlying proper development. The specialist has his place, but the family doctor must ever be the one who most fully understands the temperament of the patient and the needs of the community. He it is who most fully realizes that, as has been so well expressed by Dr. Beverley Robinson, "Man is not a mosaic composed and stuck together, of small independent parts, but not correlated vitally; that he is not merely an organic mass of blood and tissue, of which the final word comes from chemistry, pathology, physiology or bacteriology, solely, but that he is a moving vital personality, always alike in a way, but always absolutely different and distinctive."

In order that our patients may have not only the benefit of our own individual knowledge, but also that of the profession as a whole, it is necessary for us to live in friendly relationship with our brother practitioners. This will allow of a free exchange of views and a feeling of security when desiring consultation. The consultant should never, for an instant, forget that the family doctor is the one to whom the patient owes first allegiance, and whenever possible the treatment should be carried on by him under direction of the specialist. The greatest care should be taken that neither by word nor look a lack of confidence be inspired in the ability of a brother practitioner.

In order to keep abreast of the times, it is necessary to read the current literature, both medical and secular. The personal element is so large a factor in the treatment of human ills that it is of great importance that the physician have such knowledge of music, literature, the mechanical arts, athletics, wood-craft, etc., as to give him a true point of view as to the environment of his patient and enable him to give practical advice. No one thing will add so much to his fund of knowledge and mental vigor as attendance upon society meetings, local, state and national, where he meets his fellows in friendly discussion. The laborer is worthy of his hire and it is self-evident that a man who would advance in knowledge each year of his professional life must have some time in which to look about, unhampered by the daily routine. This can only be accomplished by a systematic demand that proper fees be paid for services and that patients have proper regard for the physician's hours of consultation, meals, sleep and recreation. This may seem Utopian to many, but, in the words of Polonius to Laertes—

“To thine ownself be true,
And it must follow, as night the day,
Thou canst not then be false to any man.”

GEO. A. SHEPARD.

A SURGICAL CONDITION---A MEDICINAL REMEDY.

By Spencer Carleton, A. B., M. D.

In selecting this comprehensive title my purpose was to afford opportunity in discussion for a review of Homœopathic pre- and post-operative treatment, which, as we all know, will often deter-

mine the successful issue of operative measures or obviate them altogether. Upon this phase of the subject, however, I shall not dwell. What I wish especially to present before you this evening is a newly-found relation of a remedy to a surgical condition of fairly common occurrence. The condition is rupture and separation of muscle fibres; the remedy Kali carb.

Without entering into a discussion of the merits of clinical symptoms, we all know and utilize the valuable action of such drugs as Arnica in contusions, Hypericum in nerve injuries, Staphisagria in lacerations, Calendula in incised or suppurating wounds, Ledum in punctures, Rhus in strains, Calcarea phos. in fractures and so on through a long list which carries us far into surgical domains. Now while some of these actions, such as that of Arnica and Calendula, have been long known, our knowledge of all these generalities of wide applicability has been ascertained by clinical experience. Additions to the store must be gained likewise. Naturally indications for their use are first determined by other symptoms, the new clinical relationships only gradually appearing, as I think will be shown by the cases to be related.

But to preserve the true aspect of such clinical relationships and to avoid the charge of empiricism, we must ever bear in mind that at best they are but generalities to be set aside by more precise indications for other drugs or outweighed by totality of symptoms pointing elsewhere. The contusion may require, not Arnica but any remedy, even Aconite; the strain, not Rhus but Calcarea carb., as I have had the honor to recall to our minds in previous papers. P-l-e-u-r-i-s-y does not necessarily spell Bryonia; still Bryonia is unquestionably *often indicated* in pleurisies. The totality of the symptoms must decide in any case. So all we can say is that a certain remedy is apt to be frequently indicated in a given malady. Such a correspondence I believe I have had the fortune to discover. Remembering then always and foremost to give a remedy only when indicated we may then rely upon it just as confidently in surgical as in disease conditions. With this caution in mind let me relate by a few cases how I came to consider Kali carb. often indicated in cases of muscle rupture.

Case I. Mr. B., age 71, while in St. Louis, stumbled and fell down stairs, doubling his right leg under him. After attendance by two well-known western surgeons, he was hurried East and through

the kindness of Dr. Milton Powel came under my care. The diagnosis of the other surgeons was easily confirmed,—rupture of the right Quadriceps Extensor just where it conjoined to the aponeurosis. The readily palpated rent was two and one-half inches across; the separation one and one-half inches.

The patient had been advised not to undergo operation for suturing, not only on account of danger at his age, but also because of probable non-union. In this I concurred, advising more conservative treatment for at least one month. I believed that no time would thereby be wasted, inasmuch as the ends had been separated for three days when I first saw him and primary union therefore out of the question. If operation became necessary it should be preferably later, when the first effects of shock were well over. Of course a very guarded prognosis was given anyway. A padded, straight, posterior splint was applied from hip to heel. A firm bandage extended the whole length, snug enough over the thigh to prevent muscular contraction. The turns were made in figure-of-eight form from below the patella to well above the separation, so as to approximate the ends. But despite every endeavor a quarter inch separation persistently remained.

The weeks of constrained supine posture were most trying to all of us. Decubitus, cramps and muscular twitches—painful, and threatening mechanical failure—indigestion and insomnia kept active my medical as well as surgical resources. One after the other these complications were met and mastered by their similar remedies. At the end of four weeks I could report union at the sides sufficient to reduce the total width from two and one-half to slightly under two inches. But the gap at the middle persisted. Something gained; but not particularly encouraging.

At this time close questioning elicited a fine pricking sensation, not severe enough to be called a pain, at the site of the injury and aggravated at night. This, the patient's age, his fear of being touched and the persistence of much intestinal gas—though the rest of the digestive symptoms had disappeared under other remedies—led me to think of Kali carb., of which the two hundredth potency was given in water four times a day. The result was startling. In less than three weeks union closed in so as to leave a gap only about three-quarters of an inch in width. Despite this the patient became restive at the long and monotonous confinement and he was enough

better generally to be impatient. So he asked for counsel and a well-known surgeon was called in. He heartily endorsed my surgical treatment and results and strongly advised against suturing or other operation; but he examined so forcibly that he broke up most of the union. But by this time I realized that medicine was accomplishing fully as much as surgery, so I approached my task with added confidence. Suffice it to say that two months more of the same simple surgery plus Kali carb., and nothing else, brought good, firm, complete union. The patient, an actor, afterwards went on the stage and *danced*.

The efficacy of the Kali was proven by experiment. Twice, for a period of a week each, I stopped the drug and gave sac. lac. instead. Equally promptly, progress in uniting ceased. In these muscle fractures—unlike the bone cases—one can trace progress by palpation with nicety and certainty. Not until he was practically recovered did I learn that for several days before the injury the patient had sharp, lancinating pains above the right patella.

Case II. The next case of Quadriceps rupture was surgically quite similar; but the patient's age was 75 instead of 71. Dr. Edmund Carleton was in charge, but I was privileged to make frequent visits and dressings for him. The patient's chest and kidneys were faulty, so operation was contraindicated anyway. The surgical treatment adopted was quite similar to that in case I., but after several weeks of persistent endeavor there was no union. Without going into further details the symptom complex was:—old age; pasty complexion; nervous and fidgety; easily startled; aversion to being touched; pricking sensation and sometimes sharp, stitching pain at the site of injury; much intestinal gas, and heavy swellings under the eyes.

Scoffers at Homœopathy may say that old men generally have puffs about the eyes. So they often do, but not always. Anyhow, in the presence of the other Kali symptoms they seemed worthy of notice and Dr. Carleton gave the drug, the 200th in water.

In this case, more direct symptoms, fewer complications and the absence of damage from examination led more quickly to the curative remedy, Kali carb. Other factors having been kept constant, from the beginning of the administration of this drug improvement, *i. e.*, union, began. It continued *pari passu*. In about three months all told the patient was walking; at first with a truss and crutches,

but before long without even a cane when the weather was fine. At first moderate lengthening of the conjoined tendon, due to scar tissue, prevented full extension of the leg; but this lasted only a comparatively short time.

Case III. Mr. C., age 48, of muscular build and active habit, was climbing an embankment when he felt a sudden, intense pain in the left calf. He was thrown down while attempting the next step and was unable to walk further. Palpation revealed a deep gap, about an inch across, with a separation between the ends of five-eighths inch, apparently extending through the inner belly of the left gastrocnemius muscle.

Fixation here was impossible and suturing therefore impracticable. So a plaster jacket-bandage, slit and strapped, was applied from toes to knee. Under this was a very snug figure-of-eight bandage. The latter was changed daily. With the plaster to prevent use of the foot and leg he was allowed to hobble about. Later he became impatient of the whole dressing, discarded it and went about walking upon his heel. Despite this and the consequent wide separation of the muscle ends, Kali carb. wrought a good recovery, though the scar tissue where the gap was is still distinctly palpable.

Occasional sharp pains in the calf had preceded the accident for a few hours. True to my predictions, not only did a fairly large hematoma form, but after two days the whole calf became black. After the injury extreme tenderness was present, of course. The discomfort and fear of being touched anywhere on the leg, the prickling sensation under touch and the previous sharp pains were the only available indications for Kali. Misled by the more obvious objective signs, discoloration, etc., and the like, I gave Arnica, and later Rhus, for some time without benefit before realizing the preponderating significance of the few subjective symptoms present. With the Kali improvement began and led, as you already know, to complete restoration of function.

Cases IV. and V. Since then two other cases of muscle rupture have come under my care. One, of the semi-membranosus near its tibial attachment, due to a fall while alighting from a car. The other, of the upper tibialis anticus, due to overstrain while carrying a child upstairs. These occurred in a man of thirty-five and a woman of thirty years respectively. Without giving the details of history, the absence of contraindicating symptoms rather than the

predominance of the commoner ones for Kali left me free to test the clinical indication. The drug, with only simple fixation and quiet as surgical measures, brought about speedy restoration of function. Both patients are walking easily and normally.

Can Kali carb. act as a preventive of such cases? Who can say? They usually result from sudden violence. The only evidence I can adduce is the case of a young soldier thrown from his horse with a twisting motion. With his bruises he had also a sharp stitching pain just about the interdigitation of the left serratus magnus muscle. Kali carb. removed the pain and disability in a short time.

In fine, if we admit that prickling sensations are common to healing wounds perhaps we should think of Kali carb. more frequently in connection with wounds in general. At all events this brings the proving and clinical picture into closer relationship. And it further justifies, if that be needed in the face of such good results, my belief that this great polychrest may be *often indicated* in rupture of muscles.

71 W. 50th St.

THE TOXIC EFFECTS OF ADRENALIZATION OF THE NASAL MUCOUS MEMBRANE.

By Marcel Lermoyez and Charles Aubertin.

(Translated from *Annales des Malades de L'Oreille, du Larynx, du Nez, et du Pharynx*, September, 1909. By Walter Sands Mills, A. B., M. D.)

(Continued from January.)

II.

A priori, the affirmation that adrenalin, applied to the nasal mucous membrane in moderate doses, produces no poisonous effect, must have for a corollary the generalization of this principle to all the mucous membranes of the organism.

This conclusion is the more justifiable when we know that, with the exception of the lining of the trachea and bronchi, no mucous membrane has the same power of absorption as that of the Schneiderian membrane (Marco Trèves).

Now certain clinical observations invalidate any such proposition.

In a case observed by Feiler, instillations of adrenalin in the con-

junctiva caused the appearance of cardiac troubles (tachycardia, palpitations, hypertension, dyspnea, polyuria). All these symptoms rapidly disappeared after cessation of the instillations.

O. von Furth²⁶ saw syncope, followed by convulsions lasting several hours, after an injection of adrenalin into the urethra. He did an internal urethrotomy, it is true, so that the observation is less convincing.

Roussel²⁷ applied eight drops of a solution 1-1000 to the mouth of the uterus, at the same time he had the patient ingest ten drops of the same solution to stop a metrorrhagia. It produced vertigo, with cardiac arrhythmia and anguish.

It appears unlikely that the nasal mucosa should enjoy alone a relative immunity to the contact of adrenalin. Our experiments demonstrate this non-immunity.

We have made on rabbits and on guinea pigs intranasal injections of a 1-1000 solution of adrenalin during a period varying from one to nine months. Three observations are recorded below:—

I. One rabbit received for nine months, daily, from five to fifteen drops of adrenalin in each nostril. Instillations were followed by some sneezing; but there were no other troubles, and the animal increased regularly in weight.

It was killed at the end of nine months; it then weighed 4.110 kilograms. There was no trace of atheroma in the aorta; *but the heart was at the same time hypertrophied and dilated*; the hypertrophy predominated in the left ventricle, and the walls of the right ventricle were also thickened. Empty²⁸ of blood, the organ weighed 12.50 grams. Histologically, there was hypertrophy of the muscular fibres, without interstitial lesions.

The two kidneys weighed 27 grams and presented no histological change in the epithelia or in the interstitial tissue. The liver was normal, somewhat hypoplastic. The spleen was normal. There was no arterial lesion in these viscera.

The suprarenals each weighed 60 centigrams. They presented an undoubted medullary hyperplasia with dilatation of the vessels, a phenomenon which accompanies the ordinary hypertrophy of chromaffine tissue when seen in man. The cortex was formed exclusively of spongocytes which touched on the inside the medullary region, on the outside the fibrous capsule. There was no true adenomatous hyperplasia; the structure of the gland preserved its normal character.

The nasal mucosa presented a thickening of the vascular walls which were sclerosed; there was no other lesion.

II. A second rabbit, having received the same doses of nasal instillations during ten months, was killed and presented the same *notable hypertrophy of the left ventricle*. There was no trace of arterial lesion. The kidneys were healthy, macroscopically, and the other viscera presented nothing in particular.

III. A third rabbit (female) received, in the same way, intranasal instillations of adrenalin (in the same doses). During the fifth month each instillation caused excitement and cries lasting several minutes. One morning it was found dead; but it should be noted that this death did not immediately follow the instillation (as in death by intravenous injection), the animal having been kept under observation for a half hour after each instillation.

At the autopsy it was found that the animal was pregnant and near full term. The two lungs presented considerable hemorrhagic edema. There was no atheroma. *The heart was large* (8.30 grams). The liver large and pale. The two kidneys weighed 17 grams. The spleen was purple. The suprarenals were not increased in size.

Histologically, there was acute edema of the lungs, with an enormous bloody congestion of the capillaries and serous effusion almost devoid of red cells in all the alveoli. Moreover, there was a notable hypertrophy of the walls of the branches of the pulmonary artery, a muscular hypertrophy with vacuolization of certain fibres. There was a slight endarteritis, but no periarteritis.

The kidneys presented some epithelial changes, a little congestion but no sclerosis of either glomeruli or arteries. The suprarenals presented cellular degeneration; all the cells were dark, without spongiocytes. The liver was fatty. The spleen pigmented. The ovaries normal. There was no visceral arteriosclerosis.

With regard to the nasal mucous membrane, this presented arterial lesions analogous to those already described, an enormous capillary and arterial congestion, which gave to the cut sections an aspect absolutely angiomatous.

Two conclusions may be evolved from our experiences.

A. *As to the point of view of the accident of acute poisoning*.—One of our animals died of acute edema of the lungs, more slow in its development, but analagous in form to that which followed strong intravenous injections of adrenalin.

Nevertheless we do not believe it our duty to put this fact down as necessarily due to nasal adrenalization.

Perhaps the pulmonary edema was caused by penetration of the adrenalin to the bronchial tubes? It seems hardly probable to us, however, that such a fault in technic was made, since some hundreds of intranasal instillations of adrenalin were made on our animals under the same conditions and without another such accident.

Perhaps the pregnancy had something to do with a special intolerance to adrenalin? Especially as this intolerance manifested itself progressively for some weeks. On the other hand, we have seen that Josné noted the abrupt change in the toxicity of adrenalin, when an animal, in the course of his experiments, sometimes suddenly succumbed to an abrupt pulmonary edema.

B. *As to the point of view of the accident of chronic poisoning:*—Our experiences are in accord on this point with those of Josné. We have never seen nasal adrenalization produce atheroma of the aorta.

They may be inferred on another point, since we have three times caused an hypertrophy of the heart without degeneration of the myocardium.

On the other hand, this dissociation between the arterial toxicity and the cardiac toxicity of adrenalin is not special to nasal adrenalization; Josné noted it also in intravenous adrenalization.²⁹

It is evident that experimental cardiac hypertrophy in our animals was induced by the use of doses infinitely stronger than those ordinarily used in the therapeutics of rhinology; but, on the other hand, we must not forget that man presents, towards adrenalin, a susceptibility infinitely greater than the animals of the laboratory.

III.

Caution in the use of adrenalin should be earnestly recommended to rhinologists; it is not the harmless substance that Takamine believed.

The diverse methods used in rhinology call for different precautions.

A. *FOR THE PURPOSE OF EXAMINING THE NASAL FOSSA:*—Complete adrenalization at one sitting for the purpose of examination cannot be made absolutely free from danger. On the other hand,

sufficient retraction can be obtained by painting the turbinateds with a dozen drops of a 1-5000 solution, to permit of seeing down into the sinuosities of the meatus, and to discover any suspected lesions in the cavity. A solution of 1-1000, safe in certain cases of intense inflammation (nasal gummata, rhinoliths, etc.), does not give a much stronger retraction, and causes some hours after the examination a vasomotor coryza which is intensely painful.

B. FOR THE PURPOSE OF PRODUCING PREOPERATIVE LOCAL BLOODLESSNESS:—*a.* by application. *b.* by sub-mucus injection.

a. Adrenalization by *application* may be made without danger, perfectly safe except in certain rare idiosyncrasies impossible to foresee, and which all therapeutics used in this way is exposed to and may encounter unexpectedly. As much as thirty drops of a solution of 1-1000 may be used in painting the Schneiderian membrane. Enough adrenalin to cause bloodlessness of the surface of the mucous membrane, progressively closes the channels for absorption by a sort of happy auto-regulation. It should also be stated that adrenalin to which cocaine is added is less toxic.

If, by accident, the patient swallows a little of this solution, no uneasiness should result. The overflow which runs from the nose into the esophagus causes no after effects. It is an error to attribute accidents from adrenalin in certain observations to the accidental swallowing of this substance in the course of nasal adrenalization.

b. Adrenalization by *sub-mucous injection*, a proceeding that on account of the frequency of the sub-mucous resection of the septum and the simplification of the operation of Caldwell-Suc makes more or less common. It should be recalled that the general rule fixes the average dose of one milligram of adrenalin in twenty-four hours by hypodermic injection. It is more prudent, in the course of a rhinological operation where all the poison is injected at one time, to be satisfied with ten to twelve drops of a principal solution of 1-1000, diluted with at least five times the quantity of a solution of novocaine.

C. AS A HEMOSTATIC IN EPISTAXIS:—Adrenalization is a very indifferent way of stopping a profuse epistaxis. The adrenalin, diluted by the blood, acts little or badly. Moreover, in the inevitable haste called for, one is apt to abuse this hemostatic agent. It will be prudent, then, to pour into a small receptacle forty or fifty drops of a strong solution, and to limit one's self to this quantity.

D. FOR POST-OPERATIVE TREATMENT:—Following certain minor non-hemorrhage producing nasal operations, galvano-caustic cauterizations in particular, there is nothing better than a dressing of powdered adrenalin and cocaine, made common by the practical skill of the English physicians. Thanks to this treatment, the reactions which to a varying degree inevitably follow cauterization of the turbinateds are entirely missing;—no headache, no neuralgia, no aprosexia, no nasal obstruction, no watery discharge. The patient benefits immediately and entirely by the operation which has been done to free the nose.

No adrenalin intoxication is to be feared in these cases, because the dose is weak, and the use is not prolonged.

The solution intrusted to the patient is

R. Water, 20. grams.
 Sol. Adrenalin, 1-1000, .. 5. grams.
 Chlor. of Cocaine, 0.25 grams.

Not to be renewed.

Application made every three hours maintains continued permeability of the nose. Towards the sixth day, post-operative reaction has subsided sufficiently for the use of adrenalin to be stopped and the patient to return to the classic ointments.

There is no danger of absorption by the wound; for, if done by the galvano-cautery, the scar closes the vessels; and if done by a cutting operation, such as ablution of a ridge on the septum, the adrenalin dries the wound and covers it with a protecting scab.

E. FOR THE TREATMENT OF VASO-MOTOR CORYZA:—Since the introduction of adrenalin into nasal therapeutics, it has become the fashion to use it in the obstructions and watery discharges of spasmodic coryzas, particularly in hay fever, so rebellious to so many medicines. Trivas³⁰ in his thesis, written at the beginning of the era of adrenalin does not fail to mention this therapeutic use. It is true that French rhinologists are really not partial to the employment of adrenalin in parallel cases, because of the secondary vaso-paralytic results which may follow, and they say "the remedy is worse than the disease." However, American physicians continue, the great majority, to be inclined to advise this treatment. It is also in the United States, the country of excessive reactions, where few victims of hay fever do not carry in the pocket an atomizer charged with one of the numerous aqueous or oily solutions of

adrenalin which the American pharmacist produces in profusion.

Now if Strickler saw reason formerly to say to them, "*Beware of Cocaine!*" we have a still greater need to say to these patients, "*Beware of adrenalin.*"

Unfortunately, they may abuse it.

The tendency is to increase the strength of the dose prescribed in the beginning, and very soon they exceed the permitted quantity of one milligram per day.

The persistence of the disease compelling its use during an unlimited time, and without any regulation of time it soon exceeds the classical ten days of safe adrenalization.

Our experiments show what dangers they run in such a cure. Man, very much more intolerant of adrenalin than the rabbit, runs much more risk of hypertrophy of the heart, from the abuse of nasal adrenalization. And exactly this danger is more acute in these cases, since vaso-motor coryza crops out in members of the "arthritic family," that is to say, in the hereditary candidates for arterio-sclerosis. Adrenalin, even slightly absorbed, tends to accentuate the inherent tendency to hypertrophy of the heart.

Nasal adrenalinomania, which one thus inevitably acquires, seems to us infinitely more to be feared than nasal cocaine-mania. For while the nervous troubles produced by abuse of cocaine in the nose cease rapidly when its administration is suspended, it is not demonstrated that hypertrophy of the heart caused by continued adrenalization of the nose disappears when the toxic action is suspended.

Finally, we deduce from our experiments the conclusions that adrenalin, in nasal applications, is a cardiac poison; that it may, perhaps, serve the physician in nasal surgery, but that its use by the patient should be interdicted. Nasal adrenalization will never be so inoffensive that its continued use will be always safe.

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CORRESPONDENCE.

ARE LADIES DESIRABLE OCCUPANTS OF THE BOXES AT THE ALUMNI DINNER ?

January 10, 1910.

Dear CHIRONIAN :—

The fiftieth anniversary of the foundation of the New York Homœopathic Medical College and Flower Hospital will be celebrated at the next Commencement, which will be in June and the Alumni should, it seems to me, help to make the celebration worthy of the occasion. The annual banquet of the Alumni is looked forward to by most of us who are near enough to attend it once in a while with great anticipations, for we expect to meet there many whom we have not met for a twelve-month and to make it a grand reunion; also to listen to some good and interesting speakers who shall not be too serious at all times, and to enjoy the good things which Mr. Oscar has selected for us to eat. Altogether we make our preparations to be present because we want to have a good time.

One feature of the Alumni festivities are, or should be, to bring our college into pleasant notoriety. We are anxiously looking every day for gifts from friends to help us to make the college successful and every one who is favorably impressed with the Alumni, or any of its members, may sometimes give us a friendly lift. It is something to visit the Waldorf-Astoria on any occasion when our Alumni meet to banquet, for the great ball-room never shelters a finer looking body of men than it does when the Homœopaths gather there for that purpose, and we may well wish that our friends might look in upon us then to tell of the pleasant sight before them. The banquet ought to be the means, every year, of giving the homœopathic cause a little help in a social way if rightly managed. When the banquets were first held at the Waldorf-Astoria, it was hailed as a great opportunity to popularize the college, because of the boxes surrounding the grand room on three sides, which it was thought could be filled, to advantage, with the wives and female guests of the members. Accordingly invitations were issued to the members to secure seats in the boxes for their friends, and competition was keen, with the result—a filling of the boxes with handsome women and the floor with members who, many of them, came because their wives urged them to do so and, being present once, were likely to be regular attendants in the future.

The presence of ladies in the boxes *does* attract some of the members thither occasionally during the progress of the festivities and still there are some who prefer to sit still in perfect quiet and listen to each and every word the gifted speakers at the dias deliver to us and, in deference to the latter, for the last few years the directors have thought it best that ladies be excluded from the boxes. I do not know that the ladies feel aggrieved at all over this ruling, but it does prevent a certain amount of decoration which the boxes seem to need to complete the harmony which the architect intended should prevail. Almost all of the managers of large dinners given in that room not only permit, but urge, ladies to present themselves and some of the most noted men in the land have given us speeches there that have become classic and will long be retained in history, yet they were not in the least disturbed by the little chatter which may have been heard from some of the boxes in which the fairest ladies of the city were invited guests. With due deference to the directors who are inclined to still exclude the ladies, I would ask why should we not have the ladies with us on this great semi-centennial celebration? Why should we not strive for the support of the ladies in our college work? Why not let them see for themselves what a fine body of men we have? They will tell of it, you can be sure of that and, later on, we may find that their acquaintance is not at all unfortunate.

Why not be courteous this year and open the boxes to the sweethearts, wives and other ladies, guests of the members and make the fiftieth anniversary of the old college a merry one and a notable one fittingly decorated for the occasion? If there be any speakers who cannot talk when there are ladies present, let us dismiss. If there are any churlish bachelors on the floor among the tables who do not like to see women present, let them cast their eyes only upon the speakers and close their ears tightly to all sounds except those which are masculine and upon the ground floor. If there are any who read this who agree with me that ladies are desirable as occupants of the boxes on the occasion of the banquet at the Waldorf-Astoria on June 2d, 1910, it might help to change the attitude of the directors if a word was quietly spoken in their ears; I do not know. My vote is for the opening of the boxes for the ladies.

Very sincerely yours,

JOHN B. GARRISON, M. D., '82.

Dear CHIRONIAN :

In the December number appears an article by Dr. Ginnever, Homœopathic Therapeutics versus Quinine in Malaria. I read it and said, Good for an honest man. It is so refreshing to meet a man who admits his failures and does not lay it to Homœopathy; who loves the law and earnestly endeavors to apply it, instead of resorting to all sorts of departures and tries to defend himself by prating of modern Homœopathy. Now this doctor lives in a district where malaria hatches and grows and must know whereof he affirms. So many tell us, who do not live on the Wabash or on Long Island don't know. Dr. Ginnever knows and testifies and his testimony is good.

He cures with Ipecac, Sulphur, Arnica, Ignatia 1st, mm., etc., and I could add many others I have cured with. Now how about the Quinine cures, Quinine will cure some cases where nothing else will, and that in potency like the rest of the remedies. But as the doctor knows it never cures when it is not the similimum. I would not condemn a man who faithfully and conscientiously tried for the similimum and failed if he gave Quinine to keep the patient out of the old school hands. But let him confess that it is his failure and not that of Homœopathy. Again I can understand that there is once in a great while a case for which the similimum is not known. You could not have cured a Eupatorium case before Eupatorium was discovered! So with other remedies. But with our armanentorium there are a very few cases I believe that we cannot cure. So I wish to congratulate the good doctor on his success and to extend to him my sincere sympathy for his honest failures.

DR. E. B. NASH.

Editor of the CHIRONIAN :

Dear Sir:—Inasmuch as there are many Class pictures now hanging in the Library of the College it would seem eminently fitting that the series should be as nearly complete as possible.

The earliest class represented is 1886. From that date the missing ones are as follows: '88, '89, '91, '92, '93, '94, '97 and 1909.

Any graduate who may have one of these pictures and who will communicate with the undersigned may be assured that the gift of such picture will be gratefully appreciated by the College authorities and that it will be acknowledged in the CHIRONIAN.

Very truly yours,

J. W. DOWLING,
Secretary of the Faculty.

January 3, 1910.

Dear Editor:—

The following editorial was printed in the New England Medical Gazette for June, 1909. It states the situation so well that it should be read by every physician. May I ask you to publish it and beg every reader of the CHIRONIAN to peruse it?

I once heard Bishop Fowler say that "Evangelization is a matter of dollars and cents. Give me the money and I'll save the world!" So, it seems to me, it is with Homœopathy. Give the colleges the money to build up their every department and the outcome is certain. The modern student demands the very best and will not be satisfied with less. Likewise, the public and the laws of the public are clamoring for well educated physicians. The demand must be met, and when the philanthropist realizes that he serves himself and his fellow men by endowing the medical school, the problem will be solved.

Personally, I will welcome the day when endowments will be sufficient to justify wiping out student fees and the colleges giving instruction without money and without price. Then students of proper calibre and preparation may be sifted from the mass of applicants with advantage to the profession and to the public. That day is far off, but the day of the well equipped college has already come. The mediocre medical school is doomed.

Is it not worth while for us to place this appeal in the hands of influential and well-to-do laymen? Who knows what good it might do the homœopathic cause if these truths were to sink deep into the hearts of our patrons!

Fraternally,

ROYAL S. COPELAND.

WHY THE MEDICAL SCHOOL SHOULD APPEAL TO PHILANTHROPY.

Few subjects are more suggestive of the trend of public opinion during the past years than the one dealing with the direction taken by philanthropy. In the earlier years of our country's history one of the most beneficent of its innovations was the provision for educational facilities of such nature that all persons might be able to obtain benefit therefrom, irrespective of their own personal financial condition. To this wisdom has undoubtedly been due a large part of the rapid advance made in America in practically all departments of progress.

Subsequent to the satisfactory establishment of these facilities for general education came the monetary provision for institutions of higher learning. Accordingly, colleges and universities were founded in various parts of the land. Following the Puritanical tendencies of the early settlers the theological phases of education were strongly emphasized in these places of instruction, and shortly distinct theological schools appeared. These new schools appealed to the feelings of the generously inclined, and very soon large and ample endowments were forthcoming. Some time later, coincident with the development of the modern hospital, made possible by medical researches and discoveries, the eyes of philanthropy turned toward medicine and its institutions for treating the sick.

In this last period we now live, although there seem to be signs of the beginning of a new era in the most distant future. First with general education, then with the more specialized form, with theology, and finally with the hospital all people could readily become interested as all could at a glance understand their very evident value. Hospitals of the proper kind strongly appealed, as they certainly should, to the generosity of persons of means, because the treatment of the sick and the alleviation of pain among the needy poor is a matter the value of which cannot be gainsaid. Accordingly, hospitals now possess large and generous endowments for their various needs. There has been and still is, however, another institution, too often overlooked and neglected, to which the success and perpetuation of all hospital work is due, and without which all this medical progress must cease. This is the medical school.

In former generations when the medical school consisted of the

amalgamation of a collection of men in general practice, each giving as his share merely a number of lectures and obtaining more or less ethical advertisement therefrom, salaries were unnecessary, the moderate fees of the students covering the very few expenses required. These expenses were often scarcely more than the rent of a hall or building, janitor's service, light and heat. Under such conditions medical schools were not only self-supporting but not infrequently yielded considerable income to the participants. During the past ten or twenty years, however, conditions have entirely changed in this connection.

Whereas, then, the general practitioner could give the requisite amount of instruction in all departments, now his possible field is becoming more and more limited. The sphere of medical knowledge has increased to such an extent that it is no longer possible for one brain to encompass it all. This has forced upon us the age of specialists. So great, also, have been the advances in our knowledge that it is not now sufficient to give a few or even many lectures on a subject.

Lectures must be supplemented by laboratory work, recitations, quizzes, clinics and such, all with the purpose of transmitting the maximum of information in the minimum of time. To do these things requires time in abundance, time that the busy physician, serving without pay, can ill afford to give. Or if it be laboratory in nature, a specially trained worker, one who can devote his entire attention to the subject, is required. Such a person cannot be procured without salary. Furthermore, expensive apparatus, such as microscopes, microtomes, lanterns for slides or photo-micrography, elaborate glassware, etc., are no longer luxuries but absolute necessities in the modern medical school. Many other reasons could be cited, proving the entire impossibility of conducting a good medical school as it should be conducted upon the student's fees alone. These will probably be unnecessary, however.

One may now reasonably ask: Why is it necessary to perpetuate so many medical schools if they have become so burdensome? What have these achieved in the past to justify their existence in the present? And what problems still remain for them to solve in the future? It may be well to here state our belief that there are medical schools that are by no means an honor to the profession and without

which it would be far better off. For such we enter no plea. Let them die! For those, on the contrary, that are exerting themselves to the utmost to turn out good and true men, we speak. The well-worn argument that every school should be well equipped in every line in order to give the graduate the most modern ideas continues to hold all of its original strength and must be carefully pondered. With it our readers are so familiar that it need not be further considered at present. Let us approach the subject from a somewhat different standpoint and inquire how much all medical institutions and the world at large owe to the medical schools. In short, let us consider what these schools have done for humanity.

Without doubt the two greatest advances in medicine of modern times were the discovery of anæsthesia and the study of the relation of micro-organisms to disease. Of the former we may say that while first used in hospitals, its introduction and safe employment were made possible by procedures that would now be classed as laboratory experiments. And since it was first introduced who can tell the thousands of observations that have been made by physiologists in the medical schools the world over for the purpose of ascertaining the safest preparation and the best manner of its use? So successful have been these results that fatalities from anæsthesia are now practically eliminated.

What would be the field of modern surgery to-day if it had not been for the epoch-making work of Lister along the line of bacteriological investigation? And in this early work, a laboratory worker, Klebs, it must be remembered, strongly influenced Lister. One cannot now realize the abyss into which humanity would plunge were these two things, anæsthesia and knowledge of bacterial action in surgery, taken away. The horrors of the Inquisition were not more terrible.

Perhaps of all places, however, where the results of medical research have been most valuable have been along the lines of preventive medicine. Here it is perfectly safe and conservative to say that thousands and tens of thousands of lives are saved annually by our increased knowledge of infectious diseases gained from investigations in the laboratories of medical schools.

The first disease demonstrated to be of infectious origin was anthrax, studied in the decade of 1845 to 1855 by Pollender and Davaine. While of comparatively little importance in human path-

ology it has been and still is of vital interest in certain parts of France, where in past years thousands of sheep have died from its ravages. Here it was that Pasteur, that eminent laboratory investigator, made his first advance into world-wide publicity. By careful bacteriological research he discovered a means of rendering these animals immune to anthrax. When this was widely adopted it resulted in an enormous decrease in the number of cases and a still greater decrease in the number of deaths. As a result, France has been saved thousands of dollars annually that would have otherwise been an inevitable loss.

Soon after this came the notable work of Lister in surgery, as already mentioned, made possible by the laboratory investigations of Klebs and Pasteur as well as those of Lister himself. The importance of his work can scarcely be overestimated.

During the advances in surgical procedure a French physician, Laveran, while stationed in Algiers, discovered the parasitic cause of malaria. This was not primarily due to any institutional work, and for years, thereafter no further knowledge was obtained. When, however, the institutions of research and medical learning did take the subject in hand a great advance was immediately made. The cause of the disease, the transmitting agent and measures of prophylaxis were soon ascertained and employed to such an extent that its frequency has steadily diminished, and continues to do so from year to year. It is a matter of common knowledge that but for these medical investigations and those of the somewhat closely allied disease, yellow fever, such projects as the Panama Canal would have been impossible to follow to a satisfactory termination. By them, also, Cuba has become habitable, and something more than a mere seething bed of infection as she had been for years under the regime of Spain.

Again, where would the knowledge of diphtheria and tetanus antitoxin have been gleaned had it not been for the researches and arduous investigations of these same men who as teachers and lecturers constitute the medical school? Typhoid fever is yet another disease exhaustively studied by the same coterie as are also bubonic plague, hydrophobia, influenza, cholera, leprosy and many more.

Koch did his early work on tuberculosis in an obscure Prussian town. This is, however, more a tribute to his own genius and in-

genuity than otherwise. His later work is now being done in a special laboratory. Many other diseases might be mentioned, all carefully and fully studied in our schools in such a way as to render them more or less subject to control. Some such are syphilis, gonorrhœa, meningitis, pneumonia and actinomycosis.

To the laboratories one must also go for the great majority of the work now being done along the line of various infectious diseases according to the vaccine methods introduced by Wright. This is doubtless one of the most promising of the newer methods of treatment. Its full sphere is yet unknown, but sufficient is already learned to enable one to safely say that it is a large one. Without laboratories the extensive researches concerning cancer which have occupied so many investigators for years would have been impossible. It is, unfortunately, true that work in this particular path has thus far been void of results, but as the present mystery is sure to be solved some day it is extremely probable that when the light does come it will be found that this early work made possible the dawn of that long-anticipated morning.

Illustration after illustration might be multiplied almost indefinitely showing the benefit resultant on laboratory investigations and their practical application in clinical medicine. In physiology, in chemistry, in anatomy, in surgery, in diagnosis and in treatment, the same might be said. In fact, the greatly lowered mortality in all modern civilized countries can be traced directly to the findings of the test tube and the microscope.

It is truly a great and noble achievement to save a life by a brilliant surgical operation or by some new or refined method of treatment, but far greater and more noble is it to be the person who by prolonged study and research has made such an operation or treatment possible.

In short, the hospital ministers to a limited circle that, however needy it may be, cannot compare in size or need to that open to the laboratory. The former deals with the individual, the latter with the multitude. The value of the former, yes, its very existence depends entirely on the earlier work of the latter. Without it the hospital would be plunged into the unspeakable condition of a century ago. With it, it becomes a blessing and a most noble charity. Too often, the generous philanthropist looks at the result only and does

not see the active cause. Or perhaps for various reasons the cause may be obscured for him. What a feeling of satisfaction it must be to him who is freely supplied with money and who endows a hospital, a ward or a bed, to realize that by his beneficence some of the world's suffering may be lessened, at least for those few who may be able to take advantage of it! But how much more gratification can he attain if instead of benefitting a limited number in this manner his benefactions have made possible a discovery that will be of world-wide importance and that will save thousands of lives! Such a feeling must inspire a Rockefeller, a Carnegie, a Morgan and a number of other less prominent philanthropists to even more generous donations. They must realize, as their possessions have made possible these discoveries, that to them is indeed due a distinct share of the credit accruing therefrom. Thousands of lives are annually saved as a direct result of these studies.

But the work is really only well begun. Thousands of lives are still being lost every year from diseases that are in all probability preventable. A vast amount yet remains to be done in many different departments, some begun, some well toward completion, and a large part yet practically untouched. Here are to be found, among others, the problems incident to scarlet fever, smallpox, cancer, leprosy, and yellow fever, as well as the still obscure ones in connection with tuberculosis, yellow fever, syphilis, cholera, plague, and the entire question of immunity and immunization in general. In order to study these increasingly complex problems most fully, provision by endowments must be made for special research and for the training into the medical profession of men qualified to pursue it unhampered by continual financial considerations.

Recognition of the truths of these statements is steadily if slowly coming, as indicated by the increasing benefactions to medical schools. It must be remembered that the sooner these endowments are made the sooner will be made those discoveries that will enable us to cope with diseases as yet not understood and from which people are daily and hourly dying.

The question finally comes: Will our friendly philanthropist continue to devote his attention exclusively to the hospital bed, where at best but a limited number of persons can be treated, and from which a minimum of benefit can ever be derived by the world at large, or will he take the wider view and include in his generosity

the now almost universally financially struggling medical schools, from which is continually coming work, the results of which are of untold value to the entire human race? Will he not feel more than repaid by the realization that he has been somewhat instrumental in introducing to the world something such as the meningitis serum, the diphtheria antitoxin, the hydrophobia treatment, or a serum or vaccine for the cure of typhoid, tuberculosis, cancer, or any of the various diseases that now afflict humanity? Upon the satisfactory answer to these and allied questions the future of the medical schools rests. Let us trust that the true aspect of the entire subject may become more and more evident to those persons who, while not personally in a position to themselves perform the work, are nevertheless anxious to be of actual assistance by their financial help to their associates, their country, and the world at large!

EDITORIAL

ALUMNI DAY.

On the second of June the Alumni of the New York Homœopathic Medical College and Flower Hospital will gather not only to participate in the annual banquet and to receive into membership the graduating class, but to do honor to the college from which they graduated and which on that day will celebrate its fiftieth anniversary.

Even now graduates are making advance preparations to attend this function, which bids fair to be the most successful and enthusiastic event in which the old college has entered in many years, and it is fitting that the CHIRONIAN urge each and every alumnus to make every effort to add to the general success by his presence.

To those members who have not been privileged to attend these reunions for some time a large surprise awaits. They will find a new college, in which every department is equipped to prepare the student for the best that is known in medical science. He will find laboratories which were unknown in his day; he will find the students working with instruments of precision, which a few years ago were regarded as curiosities. He will find that in pathology, bacteriology and hæmatology, the instruction which the student receives is on a par with any in the country, and, above all, he will find the law of similia taught throughout the four years' course.

If you have gotten the idea that your Alma Mater is growing old, come a few days earlier and listen to a lecture or two, or visit the hospital wards with one of the sub-clinics, hear and see for yourself that this college, your college, is doing as good work to-day as any.

SURGICAL SUGGESTIONS.

Much information concerning the nature of an injury to the elbow can be derived by comparison of the joints on both sides posteriorly, the patient facing away from the examiner.—*American Journal of Surgery.*

The presence of shreds in the urine is a presumptive evidence more useful to the surgeon who seeks the etiology of a monarticular inflammation than is the denial by the patient that he has had gonorrhea.—*American Journal of Surgery.*

If there is reason to believe that one is dealing with a subacromial bursitis, the presence of great tenderness on pressure over the humerus in the axilla should not be interpreted to gainsay the diagnosis—although such tenderness has not been described.—*American Journal of Surgery*.

If one fails to quiet a frightened, crying child sufficiently to determine the presence of a tender area, necessary to diagnosis, the administration of chloroform to the point of *primary* anesthesia will make the examination easy and, at this stage of narcosis, pressure on a tender spot will be answered by reflex movements.—*American Journal of Surgery*.

SOUTHERN HOMŒOPATHY MEDICAL ASSOCIATION.

The S. H. M. S. met in Hot Springs, Ark. Although the session was not large, it was one of enthusiasm and all papers read were of a very high order, showing much thought and study.

The sessions were held in the Arlington Hotel and much of the success of this meeting was due to the well arranged plans of the local committee, which was headed by our former president, Dr. V. H. Hallman. The social features of the meeting were well carried out by the ladies and the Business Men's League.

Unfortunately, several of the bureau chairmen were not present, in consequence a number of important papers were not presented. However, all who attended derived benefit and pleasure.

This association is now in a very healthy state and the prospects are very bright. The Medical Century has been selected as the official organ by the committee so appointed. Consequently all papers will be published and the members who are unable to attend will be able to keep in active touch with the transactions of the association.

We have made arrangements with the Institute of Homœopathy whereby anyone joining the Southern will be admitted into the Institute as well upon the payment of \$2 annual dues to the Southern, and by so doing the applicant will become a member and will receive all publications of both associations. This is done so as to build up the membership in our southland. Every graduate of Homœopathy owes it to himself and to the school to become a member of these associations. So we urge every one who is a member to secure another, and those who are not are urged to come into the fold.

Jacksonville, Fla., was selected as the next meeting place. The sessions will last for three days—December 6, 7, 8, 1910.

The following officers were elected to serve:

President, Dr. Wm. A. Boies, Knoxville, Tenn.

First Vice President, Dr. W. W. Osgood, Mobile, Ala.

Second Vice President, Dr. A. N. Pierce, Lake Charles, La.

Secretary, Dr. John T. Crebbin, New Orleans, La.

Treasurer, Dr. W. L. McCreary, Knoxville, Tenn.

OBITUARY.

SUDDEN DEATH OF DR. KNAPP, DEC. 11, 1909.

Superintendent of Hygienic Institute Had Been Sufferer From Bright's Disease for Some Time, However.

Dr. James C. Knapp, 56 years of age, superintendent of the Hygienic Institute, died at 4 o'clock Saturday afternoon at the institution. The cause of death was Bright's disease, from which the deceased had suffered since March 9, 1908. For a year after the acute attack of the disease, Dr. Knapp was unable to take active charge of the institution. Gradually since last spring he had resumed his former work at the head of the sanitarium. During the last few months he had been doing his full quota of work, until he contracted a cold about Thanksgiving time. This, however, did not prevent him from being out of doors each day. On Saturday afternoon he felt as well as usual and went for a drive along the Lake Road as far as Billsboro. Upon returning he went to his private rooms, which were on the second floor of the building. He sat down to read the morning paper. His wife had occasion to leave the room for a moment, and upon her return she found that he was dead. The physicians state that this is the way that death frequently comes from Bright's disease.

Dr. Knapp was born at Drennon Springs, Ky., on November 25, 1853. His father, James Christi Knapp, a Presbyterian minister, died early in life, leaving a small legacy of \$500 to his only son, which he decided to expend upon his education. As this sum was insufficient he borrowed from his grandfather and when he was graduated from medical college he owed \$1,200. The first money that he earned through his profession he used in paying back this borrowed money.

After receiving his preparatory education at the Genesee Wesleyan Seminary at Lima, he entered Syracuse University, from which institution he was graduated with a degree of Bachelor of Arts in 1879. Upon leaving the university he decided to study medicine and came to Geneva, where he commenced his studies under the late Dr. A. B. Smith, the founder of the Hygienic Institute. He continued his studies for five years. Two winters of this time was spent by him at the Jefferson Medical College in Philadelphia and one at the New York Homeopathic Medical College in New York. The time between his medical courses was spent at the Hygienic Institute with Dr. Smith. In the spring of 1884, having completed his three years' training, he was graduated from New York Homeopathic Medical College. He then returned to Geneva and became an assistant to Dr. Smith. In 1887 he married Miss Alice S. Reynolds, Dr. Smith's niece and foster daughter.

When Dr. Smith died in 1894 Dr. Knapp became the superintendent of the institution. Owing to the fact that Dr. Knapp combined in an unusual degree the qualities of a physician and a business man, the Hygienic Institute has grown and prospered under his administration. As a physician he was especially strong in the treatment of the chronic ills, nervous troubles and the diseases of the digestive tract. He had the opportunity to draw freely from the long and varied experience of the late Dr. Smith, to which he added a thorough modern training. This enabled him to bring to his patients the best in the healing art unhampered by any passing fad.

His skill and judgment as a business man are evidenced in the good financial condition of the institution and by the fact that he added a home atmosphere to his institution which made it an attractive place for those who came under his care.

Outside of the Hygienic Institute his principal interests were in the First Methodist Church, where he was a regular attendant and a member of the Board of Trustees for many years. He also had been a member of Ark Lodge, No. 33, Free and Accepted Masons, since 1889.

He is survived only by his widow and one daughter, Miss Alice Louise Knapp, who is a student in Syracuse University at the present time.

The funeral took place in the parlors of the Hygienic Institute on

Wednesday afternoon at 2 o'clock. Rev. Philip H. Riegel, pastor of the First Methodist Church, officiated. Burial was made in Glenwood Cemetery.

Blakeney, Hugh Stanley.

On December 19th, 1909, while going to his home in Paris, Texas, Mr. Blakeney about to graduate from Alma Mater met with his death in a railroad accident. Although not yet a graduate Alma Mater has lost one of her truest, most loyal sons, who, although deterred by sickness and conflicting advices, stuck to her principles to his death. He was an A. B. from Randolph-Macon College, of Ashland, Va., a member of 1910 Alma Mater and Alpha Chapter, Alpha Sigma Fraternity.

ALUMNI NOTES.

On January 1st, 1910, Dr. W. H. Krause, '73, will retire from general practice and do consultations by appointment only. Dr. L. W. Harnish, '08, his son-in-law, who has been associated with him for the past six years, will continue his practice at 71 East 36th Street, and have the following office hours: 8 to 9, 1 to 2 and 5 to 7; Sundays, 8 to 9. Telephone, Lenox 1694.

Dr. Edwin S. Munson, '94, announces his removal to 8 West 49th Street, New York City. Hours, 9-11 and by appointment. Telephone, 2838 Bryant.

BROOKLYN NOTES.

Dr. Mark J. Searle, house physician of Cumberland Street Hospital, is ill with scarlet fever, at the Kingston Avenue Hospital.

Dr. W. B. Winchell has been elected Consulting Physician to the Brooklyn Nursery and Infants' Hospital, and Dr. S. W. Pallister has been transferred from the medical to the surgical side. Drs. W. H. Price and F. E. W. Hopke have been elected Visiting Physicians to fill these vacancies. Dr. H. Clay Ferris, D. D. S., has been elected Dental Surgeon, and a complete equipment for dental and rhinological work recently installed.